

Abstract

Process Gas and Laser Machining Method

The invention relates to a process gas and a process of laser machining, such as laser beam fusion cutting or laser beam welding. According to the invention, a gas mixture that contains at least oxygen and hydrogen, in addition to an inert gas, is used as the process gas.

Advantageously, the ratio of oxygen to hydrogen in the process gas is hypostoichiometric with respect to the reaction $2 \text{H}_2 + \text{O}_2 \rightarrow 2 \text{H}_2\text{O}$, as then the process gas will produce a reductive effect.